



SEQUENCE LISTING

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<110> Quirk, Steven

<120> Metalloproteinase Inhibitors for Wound Healing

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<160> 20

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<212> PRT

<213> Homo sapiens

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Pro Arg Cys Gly Val Pro Asp Val

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1

5

10

15

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Asn Tyr Asn Phe Phe Pro Arg Lys Pro Lys Trp Asp

35

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<213> Homo sapiens

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1

5

10

15

Thr Leu Asp Val Met Lys Lys Pro Arg Cys Gly Val Pro Asp Val Gly

20

25

30

Glu Tyr Asn Val Phe Pro Arg Thr Leu Lys Trp Ser Lys Met Asn Leu

35

40

45

Thr Tyr

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 Glu Phe Ser Leu Met Pro Asn Ser Pro Lys Trp His Ser Arg Thr Val
 35 40 45
 Thr Tyr Arg Ile Val Ser Tyr Thr
 50 55

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 <212> PRT
 <213> Homo sapiens

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 1 5 10 15
 Thr Leu Glu Val Met Arg Lys Pro Arg Cys Gly Val Pro Asp Val Gly
 20 25 30
 His Phe Arg Thr Phe Pro Gly Ile Pro Lys Trp Arg Lys Thr His Leu
 35 40 45
 Thr Tyr Arg Ile Val Asn
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 <213> Homo sapiens

<400> 6
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 1 5 10 15
 Thr Leu Glu Val Met Arg Lys Pro Arg Cys Gly Val Pro Asp Val Gly
 20 25 30
 His Phe Ser Ser Phe Pro Gly Met Pro Lys Trp Arg Lys Thr His Leu
 35 40 45
 Thr Tyr Arg Ile Val Asn Tyr
 50 55

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 <213> Homo sapiens

<400> 7
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 Thr Leu Glu Met Met His Ala Pro Arg Cys Gly Val Pro Asp Val His
 20 25 30
 His Phe Arg Glu Met Pro Gly Gly Pro Val Trp Arg Lys His Tyr Ile
 35 40 45

Thr Tyr Arg Ile Asn Asn
50

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<213> Homo sapiens

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Leu Gln Lys Gln Leu Ser Leu Pro Glu Thr Gly Glu Leu Asp Ser Ala
1 5 10 15
Thr Leu Lys Ala Met Arg Thr Pro Arg Cys Gly Val Pro Asp Leu Gly
20 25 30
Arg Phe Gln Thr Phe Glu Gly Asp Leu Lys Trp His His His Asn
35 40 45

<210> 9
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<213> Homo sapiens

<400> 9
Met Gln Glu Phe Phe Gly Leu Lys Val Thr Gly Lys Pro Asp Ala Glu
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Thr Leu Lys Val Met Lys Gln Pro Arg Cys Gly Val Pro Asp Val Ala
20 25 30
Gln Phe Val Leu Thr Glu Gly Asn Pro Arg Trp Glu Gln Thr His Leu
35 40 45
Thr Tyr Arg Ile Glu Asn
50

<210> 10
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<213> Homo sapiens

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1 5 10 15
Thr Leu Asp Met Met Lys Lys Pro Arg Cys Gly Val Pro Asp Ser Gly
20 25 30
Gly Phe Met Leu Thr Pro Gly Asn Pro Lys Trp Glu Arg Thr Asn Leu
35 40 45
Thr Tyr Arg Ile Arg Asn Tyr
50 55

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Pro Arg Cys Gly Asn Pro Asp Val Ala Asn Tyr Asn Phe Phe Pro Arg
1 5 10 15
Lys Pro Lys

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 Pro Arg Cys Gly Asn Pro Asp Val Ala
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 Asn Tyr Asn Phe Phe Pro Arg Lys Pro Lys
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 1 5 10 15
 Leu Cys Leu Leu Gly Cys Leu Leu Ser His Ala Ala Ala Ala Pro Ser
 20 25 30
 Pro Ile Ile Lys Phe Pro Gly Asp Val Ala Pro Lys Thr Asp Lys Glu
 35 40 45
 Leu Ala Val Gln Tyr Leu Asn Thr Phe Tyr Gly Cys Pro Lys Glu Ser
 50 55 60
 Cys Asn Leu Phe Val Leu Lys Asp Thr Leu Lys Lys Met Gln Lys Phe
 65 70 75 80
 Phe Gly Leu Pro Gln Thr Gly Asp Leu Asp Gln Asn Thr Ile Glu Thr
 85 90 95
 Met Arg Lys Pro Arg Cys Gly Asn Pro Asp Val Ala Asn Tyr Asn Phe
 100 105 110
 Phe Pro Arg Lys Pro Lys Trp Asp Lys Asn Gln Ile Thr Tyr Arg Ile
 115 120 125
 Ile Gly Tyr Thr Pro Asp Leu Asp Pro Glu Thr Val Asp Asp Ala Phe
 130 135 140
 Ala Arg Ala Phe Gln Val Trp Ser Asp Val Thr Pro Leu Arg Phe Ser
 145 150 155 160
 Arg Ile His Asp Gly Glu Ala Asp Ile Met Ile Asn Phe Gly Arg Trp
 165 170 175
 Glu His Gly Asp Gly Tyr Pro Phe Asp Gly Lys Asp Gly Leu Leu Ala
 180 185 190
 His Ala Phe Ala Pro Gly Thr Gly Val Gly Gly Asp Ser His Phe Asp
 195 200 205
 Asp Asp Glu Leu Trp Thr Leu Gly Glu Gly Gln Val Val Arg Val Lys
 210 215 220
 Tyr Gly Asn Ala Asp Gly Glu Tyr Cys Lys Phe Pro Phe Leu Phe Asn
 225 230 235 240
 Gly Lys Glu Tyr Asn Ser Cys Thr Asp Thr Gly Arg Ser Asp Gly Phe
 245 250 255
 Leu Trp Cys Ser Thr Thr Tyr Asn Phe Glu Lys Asp Gly Lys Tyr Gly
 260 265 270

Phe	Cys	Pro	His	Glu	Ala	Leu	Phe	Thr	Met	Gly	Gly	Asn	Ala	Glu	Gly	275	280	285
Gln	Pro	Cys	Lys	Phe	Pro	Phe	Arg	Phe	Gln	Gly	Thr	Ser	Tyr	Asp	Ser	290	295	300
Cys	Thr	Thr	Glu	Gly	Arg	Thr	Asp	Gly	Tyr	Arg	Trp	Cys	Gly	Thr	Thr	305	310	315
Glu	Asp	Tyr	Asp	Arg	Asp	Lys	Lys	Tyr	Gly	Phe	Cys	Pro	Glu	Thr	Ala	325	330	335
Met	Ser	Thr	Val	Gly	Gly	Asn	Ser	Glu	Gly	Ala	Pro	Cys	Val	Phe	Pro	340	345	350
Phe	Thr	Phe	Leu	Gly	Asn	Lys	Tyr	Glu	Ser	Cys	Thr	Ser	Ala	Gly	Arg	355	360	365
Ser	Asp	Gly	Lys	Met	Trp	Cys	Ala	Thr	Thr	Ala	Asn	Tyr	Asp	Asp	Asp	370	375	380
Arg	Lys	Trp	Gly	Phe	Cys	Pro	Asp	Gln	Gly	Tyr	Ser	Leu	Phe	Leu	Val	385	390	395
Ala	Ala	His	Glu	Phe	Gly	His	Ala	Met	Gly	Leu	Glu	His	Ser	Gln	Asp	405	410	415
Pro	Gly	Ala	Leu	Met	Ala	Pro	Ile	Tyr	Thr	Tyr	Thr	Lys	Asn	Phe	Arg	420	425	430
Leu	Ser	Gln	Asp	Asp	Ile	Lys	Gly	Ile	Gln	Glu	Leu	Tyr	Gly	Ala	Ser	435	440	445
Pro	Asp	Ile	Asp	Leu	Gly	Thr	Gly	Pro	Thr	Pro	Thr	Leu	Gly	Pro	Val	450	455	460
Thr	Pro	Glu	Ile	Cys	Lys	Gln	Asp	Ile	Val	Phe	Asp	Gly	Ile	Ala	Gln	465	470	475
Ile	Arg	Gly	Glu	Ile	Phe	Phe	Phe	Lys	Asp	Arg	Phe	Ile	Trp	Arg	Thr	485	490	495
Val	Thr	Pro	Arg	Asp	Lys	Pro	Met	Gly	Pro	Leu	Leu	Val	Ala	Thr	Phe	500	505	510
Trp	Pro	Glu	Leu	Pro	Glu	Lys	Ile	Asp	Ala	Val	Tyr	Glu	Ala	Pro	Gln	515	520	525
Glu	Glu	Lys	Ala	Val	Phe	Phe	Ala	Gly	Asn	Glu	Tyr	Trp	Ile	Tyr	Ser	530	535	540
Ala	Ser	Thr	Leu	Glu	Arg	Gly	Tyr	Pro	Lys	Pro	Leu	Thr	Ser	Leu	Gly	545	550	555
Leu	Pro	Pro	Asp	Val	Gln	Arg	Val	Asp	Ala	Ala	Phe	Asn	Trp	Ser	Lys	565	570	575
Asn	Lys	Lys	Thr	Tyr	Ile	Phe	Ala	Gly	Asp	Lys	Phe	Trp	Arg	Tyr	Asn	580	585	590
Glu	Val	Lys	Lys	Lys	Met	Asp	Pro	Gly	Phe	Pro	Lys	Leu	Ile	Ala	Asp	595	600	605
Ala	Trp	Asn	Ala	Ile	Pro	Asp	Asn	Leu	Asp	Ala	Val	Val	Asp	Leu	Gln	610	615	620
Gly	Gly	Gly	His	Ser	Tyr	Phe	Phe	Lys	Gly	Ala	Tyr	Tyr	Leu	Lys	Leu	625	630	635
Glu	Asn	Gln	Ser	Leu	Lys	Ser	Val	Lys	Phe	Gly	Ser	Ile	Lys	Ser	Asp	645	650	655
Trp	Leu	Gly	Cys													660		

<210> 15
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<400> 15
 Met Gln Lys Phe Phe Gly Leu Pro Gln Thr Gly Asp Leu Asp Gln Asn
 1 5 10 15
 Thr Ile Glu Thr Met Arg Lys Pro Arg Cys Gly Asn Pro Asp Val Ala
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 Asn Tyr Asn Phe Phe Pro Arg Lys Pro Lys Trp
 35 40

<210> 16
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 <212> PRT
 <213> Homo sapiens

<400> 16
 Leu Gln Lys Gln Leu Ser Leu Pro Glu Thr Gly Glu Leu Asp Ser Ala
 1 5 10 15
 Thr Leu Lys Ala Met Arg Thr Pro Arg Cys Gly Val Pro Asp Leu Gly
 20 25 30
 Arg Phe Gln Thr Phe Glu Gly Asp Leu Lys Trp
 35 40

<210> 17
 <211> 43
 <212> PRT
 <213> Homo sapiens

<400> 17
 Met Gln Glu Phe Phe Gly Leu Lys Val Thr Gly Lys Pro Asp Ala Glu
 1 5 10 15
 Thr Leu Lys Val Met Lys Gln Pro Arg Cys Gly Val Pro Asp Val Ala
 20 25 30
 Gln Phe Val Leu Thr Glu Gly Asn Pro Arg Trp
 35 40

<210> 18
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<220>
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 <222> 2
 <223> Xaa = Gln or Glu

<221> SITE
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 <223> Xaa = Asp or Glu

<221> SITE
 <222> 8
 <223> Xaa = Gln or Ser

<221> SITE
<222> 9
<223> Xaa = Asn or Ala

<221> SITE
<222> 11
<223> Xaa = Ile or Leu

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<223> Xaa = Glu or Lys

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<223> Xaa = Thr or Ala

<221> SITE
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<223> Xaa = Val or Asn

<221> SITE
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<223> Xaa = Val or Leu

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<223> Xaa = Ala or Gly

<221> SITE
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<223> Xaa = Pro or Glu

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<223> Xaa = Arg or Gly

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<223> Xaa = Lys or Asp

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 <223> Xaa = Pro or Leu

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 Gly Xaa Pro Asp Xaa Xaa Xaa Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Lys
 20 25 30

<210> 19
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 <213> Artificial Sequence

<220>
 <223> Peptide capable of inhibiting the activity of a metalloproteinase

<221> SITE
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 <223> Xaa = Val or Asn

<221> SITE
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 <223> Xaa = Val, Leu or Ser

<221> SITE
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 <223> Xaa = Ala, Gly or His

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 <223> Xaa = Asn, Asp, His, Arg, Gln, or Gly

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 <223> Xaa = Tyr or Phe

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 <223> Xaa = Phe, Met, or Thr

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 <223> Xaa = Arg, Asn, or Gly

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<223> Xaa = Lys, Thr, Ser, Ile, Met, Gly, Asp, or Asn

<221> SITE
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<223> Xaa = Pro or Leu

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<223> Xaa = Lys, Val or Arg

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Pro Arg Cys Gly Xaa Pro Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15
Xaa Xaa Xaa

<210> 20
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide capable of inhibiting the activity of a metalloproteinase

<221> SITE
<222> 2
<223> Xaa = Gln or Glu

<221> SITE
<222> 5
<223> Xaa = Asp or Glu

<221> SITE
<222> 8
<223> Xaa = Gln or Ser

<221> SITE
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<223> Xaa = Asn or Ala

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<223> Xaa = Ile or Leu

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<223> Xaa = Glu or Lys

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<223> Xaa = Thr or Ala

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 <223> Xaa = any apolar amino acid

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 <223> Xaa = any polar or aliphatic amino acid

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 <223> Xaa = any apolar amino acid

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 <223> Xaa = any acidic amino acid

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 <223> Xaa = any polar, acidic, basic or apolar amino acid

<221> SITE
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 <223> Xaa = any polar or aromatic amino acid

<221> SITE
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 <223> Xaa = any polar, basic, aliphatic or apolar amino acid

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 <223> Xaa = any aromatic, aliphatic, polar, or acidic amino acid

<221> SITE
 <222> (27)...(27)
 <223> Xaa = any aromatic, apolar, or polar amino acid

<221> SITE
 <222> (28)...(28)
 <223> Xaa = any apolar or acidic amino acid

<221> SITE
 <222> (29)...(29)
 <223> Xaa = any basic, polar, or apolar amino acid

<221> SITE
 <222> (30)...(30)
 <223> Xaa = any basic, polar, aliphatic, apolar or acidic amino acid

<221> SITE
 <222> (31)...(31)
 <223> Xaa = any apolar or aliphatic amino acid

<221> SITE
 <222> (32)...(32)
 <223> Xaa = any basic or aliphatic amino acid

<400> 20
 Pro Xaa Thr Gly Xaa Leu Asp Xaa Xaa Thr Xaa Xaa Xaa Xaa Xaa Xaa
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 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 20 25 30